# Data Sheet

SCHOTT

## N-SF11
## 785257.322

| | | |
|---|---|---|
| $n_d = 1.78472$ | $\nu_d = 25.68$ | $n_F - n_C = 0.030558$ |
| $n_e = 1.79192$ | $\nu_e = 25.47$ | $n_{F'} - n_{C'} = 0.031088$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.72937 |
| $n_{1970.1}$ | 1970.1 | 1.73600 |
| $n_{1529.6}$ | 1529.6 | 1.74377 |
| $n_{1060.0}$ | 1060.0 | 1.75401 |
| $n_t$ | 1014.0 | 1.75542 |
| $n_s$ | 852.1 | 1.76182 |
| $n_r$ | 706.5 | 1.77119 |
| $n_C$ | 656.3 | 1.77596 |
| $n_{C'}$ | 643.8 | 1.77732 |
| $n_{632.8}$ | 632.8 | 1.77860 |
| $n_D$ | 589.3 | 1.78446 |
| $n_d$ | 587.6 | 1.78472 |
| $n_e$ | 546.1 | 1.79192 |
| $n_F$ | 486.1 | 1.80651 |
| $n_{F'}$ | 480.0 | 1.80841 |
| $n_g$ | 435.8 | 1.82533 |
| $n_h$ | 404.7 | 1.84235 |
| $n_i$ | 365.0 | |
| $n_{334.1}$ | 334.1 | |
| $n_{312.6}$ | 312.6 | |
| $n_{296.7}$ | 296.7 | |
| $n_{280.4}$ | 280.4 | |
| $n_{248.3}$ | 248.3 | |

### Constants of Dispersion Formula

| | |
|---|---|
| $B_1$ | 1.73759695 |
| $B_2$ | 0.313747346 |
| $B_3$ | 1.89878101 |
| $C_1$ | 0.013188707 |
| $C_2$ | 0.0623068142 |
| $C_3$ | 155.23629 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $-3.56 \cdot 10^{-6}$ |
| $D_1$ | $9.20 \cdot 10^{-9}$ |
| $D_2$ | $-2.10 \cdot 10^{-11}$ |
| $E_0$ | $9.65 \cdot 10^{-7}$ |
| $E_1$ | $1.44 \cdot 10^{-9}$ |
| $\lambda_{TK}$ [µm] | 0.294 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | 0.826 | 0.620 |
| **2325** | 0.867 | 0.700 |
| **1970** | 0.965 | 0.915 |
| **1530** | 0.994 | 0.985 |
| **1060** | 0.999 | 0.998 |
| **700** | 0.994 | 0.985 |
| **660** | 0.992 | 0.981 |
| **620** | 0.992 | 0.981 |
| **580** | 0.994 | 0.984 |
| **546** | 0.991 | 0.978 |
| **500** | 0.981 | 0.953 |
| **460** | 0.967 | 0.920 |
| **436** | 0.946 | 0.870 |
| **420** | 0.919 | 0.810 |
| **405** | 0.852 | 0.670 |
| **400** | 0.815 | 0.600 |
| **390** | 0.686 | 0.390 |
| **380** | 0.428 | 0.120 |
| **370** | 0.083 | 0.002 |
| **365** | | |
| **350** | | |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 44/37 |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2095 |
| $P_{C,s}$ | 0.4625 |
| $P_{d,C}$ | 0.2868 |
| $P_{e,d}$ | 0.2355 |
| $P_{g,F}$ | 0.6156 |
| $P_{i,h}$ | |
| | |
| $P'_{s,t}$ | 0.2059 |
| $P'_{C',s}$ | 0.4984 |
| $P'_{d,C'}$ | 0.2381 |
| $P'_{e,d}$ | 0.2315 |
| $P'_{g,F'}$ | 0.5442 |
| $P'_{i,h}$ | |

### Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

| | |
|---|---|
| $\Delta P_{C,t}$ | 0.0052 |
| $\Delta P_{C,s}$ | -0.0003 |
| $\Delta P_{F,e}$ | 0.0027 |
| $\Delta P_{g,F}$ | 0.0150 |
| $\Delta P_{i,g}$ | |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 8.5 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | 9.9 |
| $T_g$ [°C] | 592 |
| $T_{10}^{13.0}$ [°C] | 590 |
| $T_{10}^{7.6}$ [°C] | 688 |
| $c_p$ [J/(g·K)] | 0.710 |
| λ [W/(m·K)] | 0.950 |
| | |
| ρ [g/cm$^3$] | 3.22 |
| **E** [$10^3$ N/mm$^2$] | 92 |
| µ | 0.257 |
| **K** [$10^{-6}$ mm$^2$/N] | 2.94 |
| **HK**$_{0.1/20}$ | 615 |
| **HG** | 4 |
| | |
| | |
| | |
| **CR** | 1 |
| **FR** | 0 |
| **SR** | 1 |
| **AR** | 1 |
| **PR** | 1 |
| | |
| | |
| | |

### Temperature Coefficients of Refractive Index

| | $\Delta n_{rel}/\Delta T$ [$10^{-6}$/K] | | | $\Delta n_{abs}/\Delta T$ [$10^{-6}$/K] | | |
|---|---|---|---|---|---|---|
| **[°C]** | **1060.0** | **e** | **g** | **1060.0** | **e** | **g** |
| **-40/ -20** | 0.1 | 2.0 | 4.6 | -2.3 | -0.5 | 2.1 |
| **+20/ +40** | 0.1 | 2.4 | 5.6 | -1.4 | 0.8 | 4.0 |
| **+60/ +80** | 0.2 | 2.7 | 6.3 | -1.0 | 1.5 | 5.1 |